

SEQUENCE LISTING

- <110> Baehrecke, Eric H.
- <120> GENES REGULATING PROGRAMMED CELL DEATH
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<213> Drosophila melanogaster

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Ser His Leu Asn Ile Glu Glu Gln Gln Pro Ile Ala Ile Ala Gly Ser 35 40 45

Glu Asp Glu Pro Ser Gln Tyr Asn His Ser Ser Lys Glu Ile Ser Gln 50 55 60

Ser Asn Pro Asn His Cys Lys Thr Glu Asn His Arg Leu Glu Gln Gln

Thr
Pro
Asn
Leu
145
Ser
Pro

The first that the

His Asn Gly Ser Gln Leu Leu Glu Glu Glu Asp Ser Glu Asn Asn Gln 85 90 95

Thr Ser His Asp Ser Ser Arg Thr Pro Thr Pro Gly Ala Thr Ser Thr 100 105 110

Pro Ser Pro Pro Pro Glu Pro Ile Asp Trp Arg Pro Ser Ala Lys Cys 115 120 125

Asn Phe Cys Val Asn Gly Arg Leu Leu Thr Val Asn Ala Gln Gly Lys 130 135 140

Ser His Ile His Gln His Asp Ser Asp Ser Asn Ser Ser Ala Ser Leu 165 170 175

Pro His His Ile Ser Ser Ser Ser Ser Ser Asn Asn Asn Ser Ser Gly
180 185 190

Asn Arg Ala Arg His Ile Ala Ala Ser Ala Arg Ala Thr Pro Ala 195 200 205

Ala Ala Thr Pro Ala Asn Ser Leu Glu Leu Tyr Lys Leu Leu Thr Gln 210 215 220

Arg Ala Ala Lys Met Thr Ser Met Asp Ser Met Ala Ala Gln Leu Ala 225 230 235 240

Gln Phe Ser Leu Leu Ala Asp Phe Asn Leu Ile Asn Ser Leu Ala Ser 245 250 255

Gln Gln Gln Gln Gln Gln Gln Gln Ile Ala Ser Ala Val Thr Pro 260 265 270

Thr Thr Ser Glu Val Ser Ala Ala Ala Ile Ser Pro Ala Leu Lys Asp 275 280 285

Thr Pro Ser Pro Ser Val Asp Ala Pro Leu Asp Leu Ser Ser Lys Pro 290 295 300

Ser Pro Asn Ser Ser Ile Ser Gly Asp Val Lys Ser Val Arg Ala Cys Ala Thr Pro Thr Pro Ser Gly Arg Arg Ala Tyr Ser Glu Glu Asp Leu Ser Arg Ala Leu Gln Asp Val Val Ala Asn Lys Leu Asp Ala Arg Lys Ser Ala Ser Gln His His Glu Gln Arg Ser Ile Leu Asp Asn Arg Leu Phe Lys Met Lys His His Asp Gln Glu Gln Asp His Asp Gly Asp Glu Leu Glu Asp Ser Asn Asp Asp Ala Glu Ala Glu Val Asp Ser Asn Ala Ser Thr Pro Val Tyr Pro Ala Glu Phe Ala Arq Ala Gln Leu Arq Lys Leu Ser His Leu Ser Glu His Asn Gly Ser Asp Leu Gly Glu Asp Val Asp Arg Gly Ser Pro Lys Met Gly Arg His Pro Ala Cys Gly Asn Ala Ser Ala Asn Gln Gly Ala Pro Ala Ser Ile Pro Leu Asp Ala Asn Val Leu Leu His Thr Leu Met Leu Ala Ala Gly Ile Gly Ala Met Pro Lys Leu Asp Glu Thr Gln Thr Val Gly Asp Phe Ile Lys Gly Leu Leu Val Ala Asn Ser Gly Gly Ile Met Asn Glu Gly Leu Leu Asn Leu Leu Ser

Ala Ser Gln Glu Asn Ser Asn Gly Asn Ala Ser Leu Leu Gln Gln

Gln Gln His Gln Gln His His Gln Gln His His Gln Gln Gln Gln Gln Gln 530 540

Gln Gln His Val Ala Ala Tyr Arg His Arg Leu Pro Lys Ser Glu Thr 545 550 555 560

Pro Glu Thr Asn Ser Ser Leu Asp Pro Asn Asp Ala Ser Glu Asp Pro 565 570 575

Ile Leu Lys Ile Pro Ser Phe Lys Val Ser Gly Pro Ala Ser Ser Ser 580 585 590

Ser Leu Ser Pro Gly Gly Leu Val Gly Gly His His Pro Leu Asn 595 600 605

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Ser His Arg Asn Gly Ser Asn Arg Ser Pro His Ser Ala Ser Pro Met 625 630 635 640

Leu Ala Ala Val Ala Gln Gly Gly Tyr Ser Ala Gly Asn Ser Leu 645 650 655

Leu Thr Ser Ser Ser Ser Ile Gln Lys Met Met Ala Ser Asn Ile 660 665 670

Gln Arg Gln Ile Asn Glu Gln Ser Gly Gln Glu Ser Leu Arg Asn Gly 675 680 685

Asn Val Ser Asp Cys Ser Ser Asn Asn Gly Gly Ser Ser Ser Leu Gly 690 695 700

Tyr Lys Lys Pro Ser Ile Ser Val Ala Lys Ile Ile Gly Gly Thr Asp 705 710 715 720

Thr Ser Arg Phe Gly Ala Ser Pro Asn Leu Leu Ser Gln Gln His His 725 730 735

Ser Ala His His Leu Thr His Gln Gln Gln Gln Gln Gln Leu Ser Ala
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Gln Glu Ala Leu Gly Lys Gly Thr Arg Pro Lys Arg Gly Lys Tyr Arg
755 760 765

Asn Tyr Asp Arg Asp Ser Leu Val Glu Ala Val Lys Ala Val Gln Arg 770 780

Gly Glu Met Ser Val His Arg Ala Gly Ser Tyr Tyr Gly Val Pro His 785 790 795 800

Ser Thr Leu Glu Tyr Lys Val Lys Glu Arg His Leu Met Arg Pro Arg 805 810 815

Lys Arg Glu Pro Lys Pro Gln Pro Asp Leu Val Gly Leu Thr Gly Pro 820 825 830

Ala Asn Lys Leu Gln Leu Asp Lys Leu Lys Ala Gly Pro His Gly Gly 835 840 845

Ser Lys Leu Ser Asn Ala Leu Lys Asn Gln Asn Asn Gln Ala Ala 850 855 860

Leu Lys Leu Pro Leu Phe Glu Ala Gly Pro Gln Ala Leu Ser Phe Gln 885 890 895

Pro Asn Met Phe Trp Pro Gln Thr Asn Ala Thr Asn Ala Tyr Gly Leu 900 905 910

Asp Phe Asn Arg Ile Thr Glu Ala Met Arg Asn Pro Gln Ala Ser Asn 915 920 925

His His Gly Leu Met Lys Ser Ala Gln Asp Met Val Glu Asn Val Tyr 930 935 940

Asp Gly Ile Ile Arg Lys Thr Leu Gln Ala Ser Glu Gly Asn Gly Ser 945 950 955 960

Ala Ala Gly Asn Gly Ser Asn Gly Ser Asn Gly Asn Gly His Gly His 965 970 975

Gly His Gly His Gly His Ala Leu Leu Asp Gln Leu Leu Val Lys Lys

Thr Pro L	Leu Pro	Phe	Thr	Asn	His	Arg	Asn	Asn	Asp	Tyr	Ala	Ala	Thr
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Cys Ser Ser Ala Ser Gly Glu Ser Val Lys Arg Ser Gly Ser Pro 1010 1015 1020

Met Gly Asn Tyr Ala Asp Ile Lys Arg Glu Arg Leu Ser Ala Asp 1025 1030 1035

Ser Gly Gly Ser Ser Asp Glu Glu His Ser Ala Ser His Ile Asn 1040 1045 1050

Asn Asn Asn Ser Asp Leu Ala His Asn Lys Asn Lys Ser Gly Gly 1055 1060 1065

Gly Gly Gly Gly Gly Asn Gly Gln Thr Asn Gly Asn Gly Arg 1070 1075 1080

Ser Ser Arg Met Thr Ser Arg Asp Asp Ser Glu Thr Asp Ala Ser 1085 1090 1095

Ser Phe Lys Ser Gly Glu Asn Gly Gly Gln Gln Asn His Lys Met 1100 1105 1110

Met Asp Leu Asn Gly Gly Ser Ser Ser Ser His Ile Lys Cys 1115 1120 1125

Glu Ser Glu Ala Ala Thr Gly His His Ser Pro Gly His His Thr 1130 1135 1140

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Glu Asp Glu Pro Ser Gln Tyr Asn His Ser Ser Lys Glu Ile Ser Gln 50 55 60

Ser Asn Pro Asn His Cys Lys Thr Glu Asn His Arg Leu Glu Gln Gln 65 70 75 80

His Asn Gly Ser Gln Leu Leu Glu Glu Glu Asp Ser Glu Asn Asn Gln 85 90 95

Thr Ser His Asp Ser Ser Arg Thr Pro Thr Pro Gly Ala Thr Ser Thr 100 105 110

Pro Ser Pro Pro Pro Glu Pro Ile Asp Trp Arg Pro Ser Ala Lys Cys 115 120 125

Asn Phe Cys Val Asn Gly Arg Leu Leu Thr Val Asn Ala Gln Gly Lys 130 135 140

Leu Val Ala Glu Ser Ala Ala Thr Ala Thr Ser Ser Ser Thr Ser Asn 145 150 155 160

Ser His Ile His Gln His Asp Ser Asp Ser Asn Ser Ser Ala Ser Leu 165 170 175

Pro His His Ile Ser Ser Ser Ser Ser Asn Asn Asn Ser Ser Gly
180 185 190

Asn Arg Ala Arg His Ile Ala Ala Ala Ser Ala Arg Ala Thr Pro Ala 195 200 205 Ala Ala Thr Pro Ala Asn Ser Leu Glu Leu Tyr Lys Leu Leu Thr Gln 215 Arg Ala Ala Lys Met Thr Ser Met Asp Ser Met Ala Ala Gln Leu Ala 230 235 Gln Phe Ser Leu Leu Ala Asp Phe Asn Leu Ile Asn Ser Leu Ala Ser 250 245 Gln Gln Gln Gln Gln Gln Gln Gln Ile Ala Ser Ala Val Thr Pro 260 265 Thr Thr Ser Glu Val Ser Ala Ala Ile Ser Pro Ala Leu Lys Asp 280 275 Thr Pro Ser Pro Ser Val Asp Ala Pro Leu Asp Leu Ser Ser Lys Pro Ser Pro Asn Ser Ser Ile Ser Gly Asp Val Lys Ser Val Arg Ala Cys 310 Ala Thr Pro Thr Pro Ser Gly Arg Arg Ala Tyr Ser Glu Glu Asp Leu 325 330 Ser Arg Ala Leu Gln Asp Val Val Ala Asn Lys Leu Asp Ala Arg Lys 340 345 350 Ser Ala Ser Gln His His Glu Gln Arg Ser Ile Leu Asp Asn Arg Leu 355 360 365 Phe Lys Met Lys His His Asp Gln Glu Gln Asp His Asp Gly Asp Glu 370 375 Leu Glu Asp Ser Asn Asp Asp Ala Glu Ala Glu Val Asp Ser Asn Ala 385 390 395

405 410 415

Ser Thr Pro Val Tyr Pro Ala Glu Phe Ala Arg Ala Gln Leu Arg Lys

Leu Ser His Leu Ser Glu His Asn Gly Ser Asp Leu Gly Glu Asp Val
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Asp Arg Gly Ser Pro Lys Met Gly Arg His Pro Ala Cys Gly Asn Ala 435 440 445

Ser Ala Asn Gln Gly Ala Pro Ala Ser Ile Pro Leu Asp Ala Asn Val 450 455 460

Leu Leu His Thr Leu Met Leu Ala Ala Gly Ile Gly Ala Met Pro Lys 465 470 475 480

Leu Asp Glu Thr Gln Thr Val Gly Asp Phe Ile Lys Gly Leu Leu Val 485 490 495

Ala Asn Ser Gly Gly Ile Met Asn Glu Gly Leu Leu Asn Leu Leu Ser 500 505 510

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Gln Gln His Gln Gln His His Gln Gln His His Gln Gln Gln Gln Gln 530 535 540

Gln Gln His Val Ala Ala Tyr Arg His Arg Leu Pro Lys Ser Glu Thr 545 550 555 560

Pro Glu Thr Asn Ser Ser Leu Asp Pro Asn Asp Ala Ser Glu Asp Pro 565 570 575

Ile Leu Lys Ile Pro Ser Phe Lys Val Ser Gly Pro Ala Ser Ser Ser 580 585 590

Ser Leu Ser Pro Gly Gly Leu Val Gly Gly His His Pro Leu Asn 595 600 605

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Tyr Lys Lys Pro Ser Ile Ser Val Ala Lys Ile Ile Gly Gly Thr Asp 705 710 715 720

Thr Ser Arg Phe Gly Ala Ser Pro Asn Leu Leu Ser Gln Gln His His 725 730 735

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Asn Tyr Asp Arg Asp Ser Leu Trp Arg Arg Ser Arg Arg Cys Arg Glu
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Leu Lys Cys Arg Phe Ile Glu Arg Val Ala Thr Met Arg Thr Ala Phe 785 790 795 800

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Glu Thr Ala Pro Phe Arg Gly Gly Ser Thr Gly Val Ile Leu Ser Ala 885 890 895 Glu His Val Leu Ala Pro Asp Glu Arg His Glu Cys Leu Arg Pro Gly
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His Gly His Gly His Ala Leu Leu Asp Gln Leu Leu Val Lys Lys Thr 980 985 990

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